



Tropentag, October 9-11, 2007, Witzenhausen

“Utilisation of diversity in land use systems:
Sustainable and organic approaches to meet human needs”

Influence of Production System on Carcass Composition of Native and White Lamphun Cattle in the Northern Provinces of Thailand

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Abstract

In the northern provinces of Thailand there are a number of small traditional cattle farms producing beef. The objectives of this study were to evaluate the influence of cattle production system on carcass composition of native and white lamphun cattle in these areas. Most of the farms practice extensive production system. The cattle are let out to graze in the fields during the day and are kept at the farms at night. Some cattle have access to grazing areas in the forests and in the hills. At 1-2 years old, native and White Lamphun cattle averaged 154.62 ± 37.35 kg live weight while the carcass weight was 80.87 ± 19.34 kg giving a dressing out percentage of 52.37 ± 3.08 %. There were no differences ($P > 0.05$) in live weight, carcass weight and dressing out percentage between the native and white lamphun cattle. However, the relative percentage weight of the head, liver - gall bladder and kidney of native cattle (4.72 ± 0.57 , 1.30 ± 0.14 and 0.27 ± 0.04 % respectively) were higher ($P < 0.05$) than of the white Lamphun cattle (3.61 ± 0.11 , 1.49 ± 0.11 and 0.21 ± 0.03 % respectively). Relative percentage of chuck and shank of native cattle in Lampang province (17.80 ± 3.13 and 13.31 ± 2.91 % respectively) were higher ($P < 0.05$) than of native cattle in Lamphun province (12.34 ± 5.15 and 11.49 ± 2.58 % respectively). The other portions showed no significant ($P > 0.05$) differences. Tenderloin percentage of cattle in summer were significantly ($P < 0.05$) higher than cattle in rainy season (9.87 ± 2.09 and 4.41 ± 0.86 , respectively) but primal round, untrimmed neck roll and brisket of cattle in summer season (21.97 ± 4.32 , 2.57 ± 0.59 and 0.02 ± 0.01 % respectively) were significantly ($P < 0.05$) lower than of cattle in the rainy season (25.35 ± 1.44 , 5.46 ± 1.88 and 2.18 ± 0.60 % respectively). The results show that white lamphun cattle yield more meat than native cattle and that better quality meat is obtained from cattle slaughtered in the rainy season.

Keywords: Carcass composition, dressing percentage, native cattle, white Lamphun cattle